PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P200400146 WO	**FOR FURTHER ACTION**	See Form PCT/IPEA/416
International application No. PCT/DK2005/000113	International filing date *(day/month/year)* 21.02.2005	Priority date *(day/month/year)* 20.02.2004

International Patent Classification (IPC) or national classification and IPC
INV. B65B63/02 B65B9/02

Applicant
ROCKWOOL INTERNATIONAL A/S et al.

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
   a. ☒ *sent to the applicant and to the International Bureau)* a total of 5 sheets, as follows:
      ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒	Box No. I	Basis of the report
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☒	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
15.12.2005	05.07.2006

Name and mailing address of the international preliminary examining authority:

European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized officer

Ungureanu, M

Telephone No. +49 89 2399-8418

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/DK2005/000113

Box No. I Basis of the report

1. With regard to the **language**, this report is based on

   ☒ the international application in the language in which it was filed

   ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of:
   - ☐ international search (under Rules 12.3(a) and 23.1(b))
   - ☐ publication of the international application (under Rule 12.4(a))
   - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages	
1-11	as originally filed
Claims, Numbers	
1-18	filed with telefax on 31.03.2006
Drawings, Sheets	
1/5-5/5	as originally filed

   ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☒ The amendments have resulted in the cancellation of:
   - ☐ the description, pages
   - ☒ the claims, Nos. 19
   - ☐ the drawings, sheets/figs
   - ☐ the sequence listing *(specify)*:
   - ☐ any table(s) related to sequence listing *(specify)*:

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
   - ☐ the description, pages
   - ☐ the claims, Nos.
   - ☐ the drawings, sheets/figs
   - ☐ the sequence listing *(specify)*:
   - ☐ any table(s) related to sequence listing *(specify)*:

* *If item 4 applies, some or all of these sheets may be marked "superseded."*

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-18
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-18
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-18
	No:	Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

V. 1. In view of the issues mentioned under VIII regarding the interpretation of the claims, each of the independent claim 1 and 10 are considered as neither disclosed in, nor suggested by the available prior art (Article 33(2) and 33(3) PCT). Consequently, the subject-matter of dependent claims 2 to 9 and 11 to 18 are considered to fulfill as well the requirements of novelty and inventive step.

VIII. By "evacuating" and "evacuation" used in claim 1 and claim 10 it was understood and interpreted that it concerns "evacuating **the air" from** the package (package= product enclosed by the foil) and the "evacuation **of the air"** respectively, by using the evacuation means 40 that according to the description page 8, line 23, "remove air from the inside of foil".

Claims

1. A method of making a package (5) comprising a mineral wool product (1) substantially air-tightly enclosed by a foil (25), characterised by

bringing about a dimensional reduction of said mineral wool product (1) by mechanically compressing said mineral wool product (1) in a first direction using mechanical compressing means (30) and

evacuating said dimensionally reduced mineral wool product (1) enclosed by said foil (25),

said evacuation being performed while essentially maintaining said dimensional reduction,

and said mechanical compression provided by said compressing means (30) being released while performing said evacuation.

2. A method according to the preceding claim, said evacuation of said dimensionally reduced mineral wool product (1) enclosed by said foil (25) being selected to maintain, or essentially maintain, said dimensional reduction.

3. A method according to any of the preceding claims wherein said mineral wool product (1) is enclosed by said foil (25) after said mechanical compression, said dimensionally reduced mineral wool product (1) enclosed by said foil (25) being then evacuated.

4. A method according to any of claims 1 or 2, wherein said mineral wool product (1) is enclosed by said foil (25) before said mechanical compression, said dimensionally reduced mineral wool product (1) enclosed by said foil (25) being then evacuated.

5. A method according to any of claims 1 or 2, wherein said mineral wool product (1) is enclosed by said foil (25) during said mechanical compression, said dimensionally reduced mineral wool product (1) enclosed by said foil (25) being then evacuated.

6. A method according to any of the preceding claims, said mineral wool product (1) having substantially parallel opposed surfaces (1') defining before said compression a dimension (T) of said mineral wool product (1), said mechanical compressing means (30) applying a uniform or essentially uniform pressure against said opposed surfaces (1').

7. A method according to the preceding claim wherein the pressure within said package (5) comprising said mineral wool product (1) enclosed by said foil (25) is balanced with the pressure on said surfaces (1') required to obtain said dimensional reduction (T-t).

8. A method according to the preceding claim wherein said mechanical compressing means (30) includes a flat surface (30') press applied flatly against at least one of said opposed surfaces (1') and displaced to provide said dimensional reduction (T-t).

9. A method according to any of the preceding claims, the dimensional reduction being at most 70%, preferably no more than 60%.

10. An apparatus (A) for making a package (5) comprising a mineral wool product (1) substantially air-tightly enclosed by a foil (25), characterised by

mechanical compressing means (30) adapted for receiving said mineral wool product (1) and for compressing said mineral wool product (1) in a first direction to bring about a dimensional reduction thereof,

wrapping means (W) for enclosing said mineral wool product (1) with a web of a substantially air-tight foil (25),

evacuating means (40) arranged downstream of said compressing means (30) for evacuating said mineral wool product (1) compressed by said compressing means (30) and enclosed by said foil (25).

11. An apparatus according to the preceding claim, said wrapping means (W) being operable to wrap said foil (25) around said mineral wool product (1) before activation of said mechanical compressing means (30) for bringing about said dimensional reduction, said wrapping means (W) comprising sealing means (17, 18) operable to seal said foil (25) after said wrapping, said evacuating means (40) being operable to evacuate said mineral wool product (1) enclosed by said sealed foil (25).

12. An apparatus according to the preceding claim, including conveyor means (8, 9, 12", 14) for conveying said mineral wool product (1) along a path, said wrapping means (W) including a supply (15) of said web and receiving means (20) for receiving an end of said web, said web being extendable between said supply (25) and said receiving means (20) across said path to receive said mineral wool product (1) in a receiving area (R), said compressing means (30) being arranged downstream of said receiving area (R).

13. An apparatus according to claim 12, said wrapping means (W) being operable to wrap said web around said mineral wool product (1) after activation of said mechanical compressing means (30) for bringing about said dimensional reduction, said wrapping means (W) comprising sealing means (17, 18) operable to seal said foil (25) after said wrapping, said evacuating means

(40) being operable to evacuate said mineral wool product (1) enclosed by said sealed foil (25).

14. An apparatus according to the preceding claim, including conveyor means for conveying said mineral wool product (1) along a path, said wrapping means (W) including a supply (15) of said web and receiving means (20) for receiving an end of said web, said web being extendable between said supply (15) and said receiving means (20) across said path to receive said mineral wool product (1) in a receiving area (R), said compressing means (30) being arranged upstream of said receiving area (R).

15. An apparatus according to any the preceding claims 10-14, said evacuation means (40) including surfaces (12', 12") for maintaining said dimensional reduction during said evacuation.

16. An apparatus according to any of the preceding claims 10-15, said compressing means including a flat surface (30') displaceable press (30).

17. An apparatus according to claim 10, said wrapping means (W) being operable to wrap said web around said mineral wool product (1) during activation of said mechanical compressing means (30) to bring about said dimensional reduction, said wrapping means (W) comprising sealing means (17, 18) operable to seal said foil (25) after said wrapping, said evacuating means (40) being operable to evacuate said mineral wool product (1) enclosed by said sealed foil (25).

18. An apparatus according to the preceding claim, said mechanical compressing means (30) including first and second opposed conveyor means (9', 9") for conveying said mineral wool product (1) along a path and defining there between a passage of decreasing width for obtaining said dimensional reduction, said wrapping means (W) including a supply (15) of said web and receiving means (20) for receiving an end of said web, said

receiving means (20) for receiving an end of said web, said web being extendable between said supply (15) and said receiving means across said path to receive said mineral wool product (1) in a receiving area, said compressing means (30) being arranged downstream of said receiving area.